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America Losing High-Tech Race To the Japanese

The United States, once the colossus of high technology, now finds its preeminence threatened on all sides, especially by the Japanese.

As I've already reported, U.S. officials are convinced that a Japanese computer company, Hitachi, is behind a covert effort to wring high-tech secrets out of IBM. These officials also believe that the Japanese are determined to become No. 1 in the vital area of semiconductors.

Some experts predict that semiconductors—the "building blocks" for a variety of sophisticated electronic equipment—will be as important to the world economy over the next few years as crude oil was in the 1970s. The country that takes the lead in semiconductors will have an important advantage in computers, telecommunications, robotics, aerospace and other high-tech fields.

But the United States is losing its lead in this international competition, while Japan is coming on fast. The U.S. share of the world high-tech market has declined by 15 percent in recent years, while Japan's share has increased 25 percent.

An important reason for this slippage can be found in a comparison of expenditures for research and development over the past 20 years. While U.S. R&D investment has declined by one-fifth, Japan's has jumped by one-third.

Another reason for America's increasingly beleaguered position in high-tech competition is the different attitude taken by the U.S. and Japanese governments on antitrust enforcement. Japan encourages its industries to pool their efforts in joint R&D ventures. But American companies risk government prosecution—often instigated by rivals who are left out of a joint venture.

How important is the erosion of U.S. dominance in the high-tech area? Trade Representative William E. Brock told my associate Michael Binstein: "There would be very serious fallout if we lost the computer race, if for no other reason than national security. You bet your life we better be concerned about it and start busting our rear doing something."

Upgrading the quality of U.S. technological education and relaxing antitrust enforcement are two of Brock's highest priorities. He explained that current antitrust laws do not explicitly rule out cooperative research efforts, but the laws are fuzzy, so it's the better part of discretion for U.S. companies to avoid such joint ventures entirely.

Besides computers and semiconductors, the U.S. lead in other high-tech areas is being challenged—again, mainly by the aggressive Japanese. For example:

- **Aircraft:** Just a few years ago, American manufacturers had 95 percent of commercial aircraft orders. By 1981, Airbus Industries, a European consortium, had claimed 25 percent of the world market for jet aircraft, and half of the new orders for wide-body planes.

- **Space:** The United States is slipping fast. The Japanese are putting up satellites and developing their own launch vehicles. France, working with other European countries, is rapidly developing a launch capability that will challenge the U.S. monopoly in communications satellites.

- **Fiber optics:** Japan has moved into this potentially lucrative field and has already taken a clear lead in light-source technology.

- **Robotics:** The United States still has the lead in research and design, but the Japanese are far ahead in production and use, with about 3.5 times as many robots in use as we have.

- **Pharmaceuticals:** Up to 1960, American companies dominated research in this area and produced more than half of all new products. Japanese firms have now taken the lead in new antibiotic compounds. Seven of 11 new antibiotics in one recent year were Japanese.